

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Holzbach, Mark E.; Chen, David T.
 Assignee: Zebra Imaging, Inc.
 Title: Rendering Methods For Full Parallax Autostereoscopic Displays
 Serial No.: Unassigned Filing Date: Herewith
 Examiner: Unassigned Group Art Unit: Unassigned
 Docket No.: M-8621-1D US Client Ref. No.: 172

San Jose, California
 January 28, 2002

BOX PATENT APPLICATION
 COMMISSIONER FOR PATENTS
 Washington, D. C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Prior to examining this patent application, please enter the following amendments and consider the following remarks.

AMENDMENTS*In the Specification*

The first paragraph on page 1, is changed as follows:

RELATED PATENT APPLICATION

This application is a division of Application No. 09/474,361, filed December 29, 1999, which claims the benefit of U.S. Provisional Application No. 60/114,133, filed December 30, 1998 and entitled "RENDERING METHODS FOR FULL PARALLAX SPATIAL DISPLAYS".

In the Claims

10058710-012802

Please cancel claims 12-17.

Please amend the claims as follows:

10. (Amended) A full parallax autostereoscopic print of a digital scene, whose image data is rendered according to the following steps:

defining an image plane that passes through at least a portion of said scene;
dividing the image plane into a plurality of contiguous image elements;
simulating two camera frustra on opposing sides of said image plane, each camera frustrum having an associated eyepoint;
defining a near clipping plane of said frustra on said image plane;
for each of said contiguous image elements, determining a distance between said eyepoint and said near clipping plane that would avoid near clipping of said scene, thereby determining a set of near clipping plane distances;
positioning said camera frustra along said z axis in accordance with one or more of said near clipping plane distances;
generating, for each of said contiguous image elements, image data for each of said cameras; and combining said image data, thereby rendering said scene.

11. (Amended) A computer-readable medium whose contents cause a computer system to render image data for a full parallax autostereoscopic display, by performing the steps of:

defining an image plane that passes through at least a portion of said scene;
dividing the image plane into a plurality of contiguous image elements;
simulating two camera frustra on opposing sides of said image plane, each camera frustrum having an associated eyepoint;
defining a near clipping plane of said frustra on said image plane;
for each of said contiguous image elements, determining a distance between said eyepoint and said near clipping plane that would avoid near clipping of said scene, thereby determining a set of near clipping plane distances;

positioning said camera frustra along said z axis in accordance with one or more
of said near clipping plane distances;
generating, for each of said contiguous image elements, image data for each of
said cameras; and
combining said image data, thereby rendering said scene.

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REMARKS

Claims 1-11 are pending. Claims 12-17 have been cancelled. Claims 10 and 11 are amended to correct a formal matter. The applicants respectfully submit that these amendments in no way change the intended scope of coverage of claims 10 and 11.

The specification has been amended as illustrated above and in the Appendix. No new matter has been added.

In view of the claims set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned.

EXPRESS MAIL LABEL NO:

EL830059253 US

Respectfully submitted,



Marc Ascolese
Attorney for Applicant(s)
Reg. No. 42,268

10056710-013802

Appendix: Version with Markings to Show Changes Made

The first paragraph on page 1, is changed as follows:

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- dividing the image plane into a plurality of contiguous image elements;
- simulating two camera frustra on opposing sides of said image plane, each camera frustrum having an associated eyepoint;
- defining a near clipping plane of said frustra on said image plane;
- for each [image element]of said contiguous image elements, determining a distance between said eyepoint and said near clipping plane that would avoid near clipping of said scene, thereby determining a set of near clipping plane distances;
- positioning said camera frustra along said z axis in accordance with one or more of said near clipping plane distances;
- generating, for each of said contiguous image elements, image data for each of said cameras; and combining said image data, thereby rendering said scene.